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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/723,566 | 11/26/2003 | Carl E. Fabian | 0018-14 | 9944 |
| 25901 | 7590 | 03/15/2006 | EXAMINER | |
| ERNEST D. BUFF | | | GILBERT, SAMUEL G | |
| ERNEST D. BUFF AND ASSOCIATES, LLC. | | | ART UNIT | PAPER NUMBER |
| 231 SOMERVILLE ROAD | | | | 3735 |
| BEDMINSTER, NJ 07921 | | | | |

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/723,566 | FABIAN ET AL. | |
| | Examiner | Art Unit | |
| | Samuel G. Gilbert | 3735 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 December 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 17 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-19 and 22-25 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/9/2006.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species of the claimed invention: Figure 1, Figure 2, Figure3 and Figure 4.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1, 2, 14, 21, 22 and 24 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over

the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. Ernest Buff on 9/12/2005 a provisional election was made with traverse to prosecute the invention of Figure 2, claims 1-9, 11-16, 18-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10 and 17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant's election with traverse of the embodiment of Figure 2, claims 1-9, 11-16 and 18-24 in the reply filed on 12/19/2005 is acknowledged. The traversal is on the ground(s) that the embodiments of figures 2 and 3 are not distinct, page 12 line 10, and that the fields of search would be essentially co-extensive and the best interest of the public would be served by having all the claimed subject matter in the same application. This is not found persuasive because the field of search is not co-extensive and further even if the search was coextensive there is a burden in the search based on the plurality of distinct and divergent embodiments. The applicant has indicated that the embodiments of figures 2 and 3 are not distinct and therefore the embodiments of both

figures 2 and 3 will be considered elected and examined. However the applicant did not clearly indicate the remainder of the embodiments are not distinct, therefore in view of the divergent subject matter and non coextensive search the requirement for the election is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

The information disclosure statement filed 1/9/2006 has been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 – “said strips” in line 2 is indefinite because claim 22 sets forth one or more strips, therefore it is unclear if the applicant is intending to include one or more strips in claim 23 or a plurality of two or more strips. The claim should end with a period.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 14-16, 18, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Fabian (5,057,095).

Claim 1 – Fabian teaches a magnetomechanical marker having a resonant frequency in the range of 0-1 gigahertz, which includes 70-300kHz. See column 4, lines 1-7.

Claim 2 – Fabian teaches a magnetomechanical marker having a resonant frequency in the range of 0-1 gigahertz, which includes 70-300kHz. See column 4, lines 1-7. Element –15- is an interrogator, element –28- is a detection means, and indicating means are set forth in claim 2.

Claim 3 – “ring down” and dipole field is set forth in column 4 lines 33 and 34.

Claims 4 and 5 – applicant's attention is invited to column 4 lines 35-67. Element –34- is a magnetorestrictive alloy, element –36- is a bias means, and a housing is provided by elements –38- and –31-.

Claims 14-16, 18 and 19 – the method as claimed is set forth in Fabian, the examiner is taking the detecting antenna to be proximate the operating room.

Claim 22 – element –34- is a magnetomechanical element, the claim includes a device having only one strip, elements –31- and –38- form a housing that is sized to allow free vibration and element –36- is a bias magnet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fabian(5,057,095) as applied above and further in view of Irizarry et al (2002/0005783).

Fabian teaches a device as claimed but does not teach a plurality of elongated strips with coincidental centers and being non-parallel. Irizarry et al teaches a magnetomechanical marker teaching two non-parallel strips to increase the detection rate of the marker, paragraph [0034]. It would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to include a second non-parallel strip as taught by Irizarry et al with the marker taught by Fabian to provide the benefit of increasing the detection rate of the marker, as taught in paragraph [0034] of Irizarry et al. Fabian teaches a single housing it is therefore the examiner's opinion that the second non-parallel strip would be placed in the single housing of Fabian.

Appropriate modification in the shape of the housing and cavity therein would be required to house the second strip. The physical incorporation of separate housings as set forth in Irizarry et al is not required for the combination not required for the combination only the concept of a plurality of non-parallel strips for improved performance.

Claims 6-8 – the applicant argues that the magnetomechanical elements of Irizarry et al are enclosed in separate housings and therefore does not teach “a magnetomechanical element comprises plural strips that together constitute a magnetomechanical element and are together enclosed in a housing. It is the examiners position that Irizarry et al teaches a single marker that includes plural strips and that the strips are enclosed in a housing. The housing may be separate but work together to form a single housing or separate portions of a single housing. Neither of claims 4 or 6 require together in a single housing. Claims 7 and 8 set forth the only required orientation, centers coincident and non-parallel, which is clearly set forth in Irizarry et al.

Claim 23 – element –34- is a magnetomechanical element, the claim includes a device having only one strip, elements –31- and –38- form a housing that is sized to allow free vibration and element –36- is a bias magnet. It would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to include a second non-parallel strip as taught by Irizarry et al with the marker taught by Fabian to provide the benefit of increasing the detection rate of the marker, as taught in paragraph [0034] of Irizarry et al.

Claim 25 - using the combined apparatus set forth above in the method of Fabian would result in the claimed method.

Claims 9, 11-13, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fabian(5,057,095) in view of Irizarry et al (2002/0005783) as applied to claims 6-8 and 22 above, and further in view of Herzer(6,359,563) and Tanji et al (6,407,676). The combination of Fabian and Irizarry et al teaches a device as claimed but does not teach the first and second magnetomechanical strips one on either side of the bias magnet within the same housing. Herzer teaches the use of a plurality of resonator pieces two allow the width of the marker to be reduced but does not teach placing the resonators on both sides of the bias magnet. Tanji et al teaches placing resonators on both sides of the bias magnet to allow the marker to be made smaller. It would have been obvious to one of ordinary skill in the medical arts at the time the invention was made to use two strips, one on each side of the bias magnet, in place of each of the single strips as taught by the combination of Fabian and Irizarry et al. to allow the size of the marker to be reduced as taught by Herzer(6,359,563) and Tanji et al.

Claim 11 – strips of the same size and material have the same resonant frequency and strips of different size and or material would have different resonant frequencies(column 7 lines 1-23 of Tanji et al).

Claims 12 and 13 – Tanji et al teaches a resonant frequency selected in the range of 30 kHz-445kHz.

Claim 24 – elements –31- and –38- form a housing.

Response to Arguments

Applicant's arguments filed 12/19/2005 have been fully considered but they are not persuasive. The applicant argues that Fabian sets forth a large frequency range of operation from 0-1 gigahertz, but nothing in Fabian sets forth the specific frequency range of operation of the magnetomechanical marker set forth in Fabian. Further the applicant argues that known magnetomechanical markers operate at much lower frequencies than the claimed 70-300kHz range with 58 kHz being the typical operating frequency.

With respect to the frequency range of the "conventional magnetomechanical system" it is the examiner's position that the known magnetomechanical elements include a frequency range of at least between 50 and 445 kHz. Applicant's attention is invited to How et al. column 5 lines 28 and 29; Tanji et al. column 6 lines 65-67; Hasegawa column 3 lines 25-30; and VonHoene et al column 8 lines 44-52 and Table 1. In view of the known resonant frequency ranges set forth. It is the examiner's position that the magnetomechanical resonator of Fabian operates in at least a frequency range of 50-445 kHz.

Further, the applicant argues that it would be impossible to construct a magnetomechanical marker having a resonant element of 1 GHz. The examiner's position that it may be possible to produce such a resonant element however a magnetomechanical resonator that would resonate at 1 GHz would not function as a

marker which is capable of being used in the marker systems currently available. Therefore the examiner agrees with the applicant regarding 1 GHz.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Gilbert whose telephone number is 571-272-4725. The examiner can normally be reached on Monday-Friday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on 571-272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Samuel G. Gilbert
Primary Examiner
Art Unit 3735

sgg